

## GAS X1/2CE - GAS X2/2CE - GAS X3/2CE - GAS X4/2CE - GAS X5/2CE

Gas burners two stages with: aluminum body, fan at high pressurisation and combustion head with adjustment at high efficiency and high flame stability and protection cover with noise reduction plate.

Compact overall dimensions and disposition rationalized of the components with accessibility facilitated for the operations of setting and maintenance.

Available in the versions METHANE (natural gas) or L.P.G. (to specify at the order) on demand specific versions for town gas, coal gas or biogas.

Gas train completely assembled, electrically linked and tested; complete of two stages working valve with flow adjustment, safety valve, minimum gas pressure switch and stabiliser filter of gas pressure.

Versions F with cover of protection in steel and specific features for the application on industrial ovens and bakery ovens.

Complete of connector plug / socket 7 poles, flange and gasket for installation on generator.



Fig. 1 GAS X4/2CE

TECHNICAL DATA AND OPERATING RANGE DIAGRAM GAS X1/2CE - GAS X2/2CE

MODEL		GAS X1/2CE	GAS X2/2CE
Thermal power min. - max. *	[Mcal/h]	15.5/20-50	21/35-80
Thermal power min. - max. *	[kW]	18/23.2-58.1	24.4/40.7-93
Gas flow G20 (NATURAL GAS) min. - max. *	[Nm <sup>3</sup> /h]	1.8/2.3-5.8	2.5/4.1-9.4
Gas flow G31 (L.P.G.) min. - max. *	[Nm <sup>3</sup> /h]	0.7/0.9-2.3	0.9/1.6-3.6
Fuel: NATURAL GAS (second family) - L.P.G. (third family)			
Fuel category:		I2R,I2H,I2L,I2E,I2E+,I2Er,I2ELL,I2E(R) / I3B/P,I3+,I3P,I3B,I3R	
Intermittent working operation (min. 1 stop every 24 hours) two stages			
Environmental conditions operation / storage:		-15...+40°C / -20...+70°C, rel. humidity max. 80%	
Max. temperature combustion air	[°C]	60	60
Min. pressure gas train D1/2"-S NATURAL GAS/L.P.G. **	[mbar]	14/31	-
Min. pressure gas train D3/4"-S NATURAL GAS/L.P.G. **	[mbar]	-	14/28
Max. pressure at the entry of valves (Pe. max)	[mbar]	60	360
Nominal electric power	[W]	110	130
Fan motor	[W]	75	75
Nominal motor current absorption	[A]	0.55	0.55
Power supply:		1N~230V - 50Hz	
Electric protection degree:		IP 40	IP 40
Noisiness *** min. - max.	[dB(A)]	60-61	61-62
Burner weight ****	[kg]	11	11.5

\* Reference conditions: Environment temperature 20°C - Barometric pressure 1013 mbars - Altitude 0 metre (sea level).

\*\* Minimal feeding-gas pressure to the gas train to get the maximum power of the burner, considering counter-pressure in combustion chamber of value 0 (zero).

\*\*\* Measured sonorous pressure in the laboratory combustion, with functional burner on beta boiler to 1 metre of distance (UNI EN ISO 3746 law - method of control Class 3 - The tolerance of the measured pressure can be taken equal to ± 1 [dB(A)]).

\*\*\*\* For burner with cover in steel (F) add 3 kg to the weight.

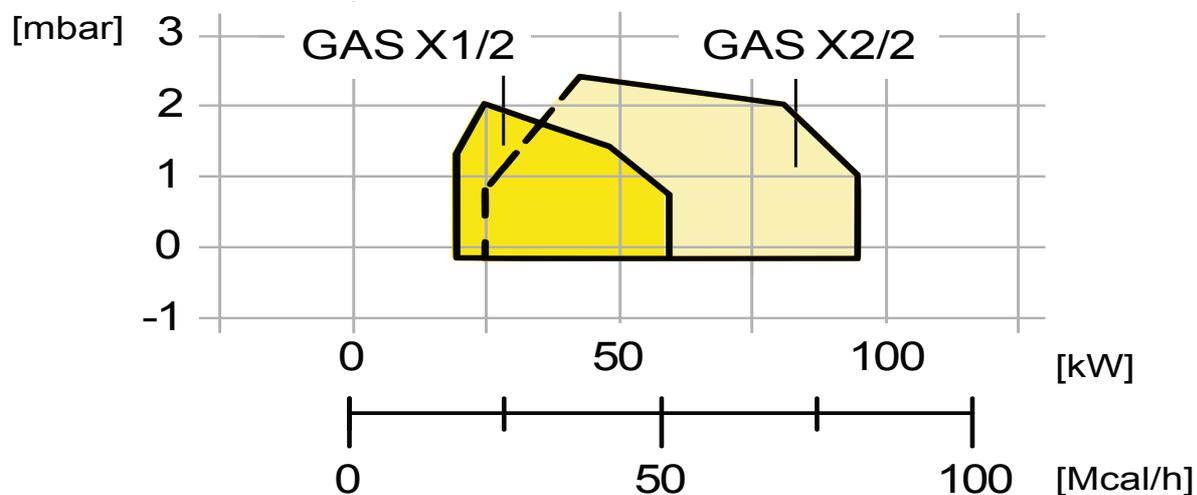


Fig. 2 X = Thermal power Y = Pression in the combustion chamber

The firing rates has been obtained based on test boilers in accordance with EN267 standards and are indicative of matching the burner to the boiler. For the correct operation of the burner, combustion chamber dimensions must be in accordance with current regulation. In case of non-compliance, contact the manufacturer.

TECHNICAL DATA AND OPERATING RANGE DIAGRAM GAS X3/2CE - GAS X4/2CE

MODEL		GAS X3/2CE	GAS X4/2CE
Thermal power min. - max. *	[Mcal/h]	30/60-150	55/100-200
Thermal power min. - max. *	[kW]	34.9/69.8-174	64/116-232
Gas flow G20 (NATURAL GAS) min. - max. *	[Nm <sup>3</sup> /h]	3.5/7-17.4	6.4/11.6-23.2
Gas flow G31 (L.P.G.) min. - max. *	[Nm <sup>3</sup> /h]	1.3/2.7-6.5	2.5/4.5-9
Fuel: NATURAL GAS (second family) - L.P.G. (third family)			
Fuel category:		I2R,I2H,I2L,I2E,I2E+,I2Er,I2ELL,I2E(R) / I3B/P,I3+,I3P,I3B,I3R	
Intermitted working operation (min. 1 stop every 24 hours) two stages			
Environmental conditions operation / storage:		-15...+40°C / -20...+70°C, rel. humidity max. 80%	
Max. temperature combustion air	[°C]	60	60
Min. pressure gas train D1"-S NATURAL GAS/L.P.G. **	[mbar]	14/31	14/21
Min. pressure gas train D1"1/4-S NATURAL GAS/L.P.G. **	[mbar]	11/30	11/19
Min. pressure gas train D1"1/2-S NATURAL GAS/L.P.G. **	[mbar]	10/28	8/17
Max. pressure at the entry of valves (Pe. max)	[mbar]	360	360
Nominal electric power	[W]	200	226
Fan motor	[W]	110	200
Nominal motor current absorption	[A]	0.77	1.35
Power supply:		1N~230V - 50Hz	
Electric protection degree:		IP 40	IP 40
Noisiness *** min. - max.	[dB(A)]	66-69	66-69
Burner weight ****	[kg]	16	19

\* Reference conditions: Environment temperature 20°C - Barometric pressure 1013 mbars - Altitude 0 metre (sea level).

\*\* Minimal feeding-gas pressure to the gas train to get the maximum power of the burner, considering counter-pressure in combustion chamber of value 0 (zero).

\*\*\* Measured sonorous pressure in the laboratory combustion, with functional burner on beta boiler to 1 metre of distance (UNI EN ISO 3746 law - method of control Class 3 - The tolerance of the measured pressure can be taken equal to ± 1 [dB(A)]).

\*\*\*\* For burner with cover in steel (F) add 3 kg to the weight.

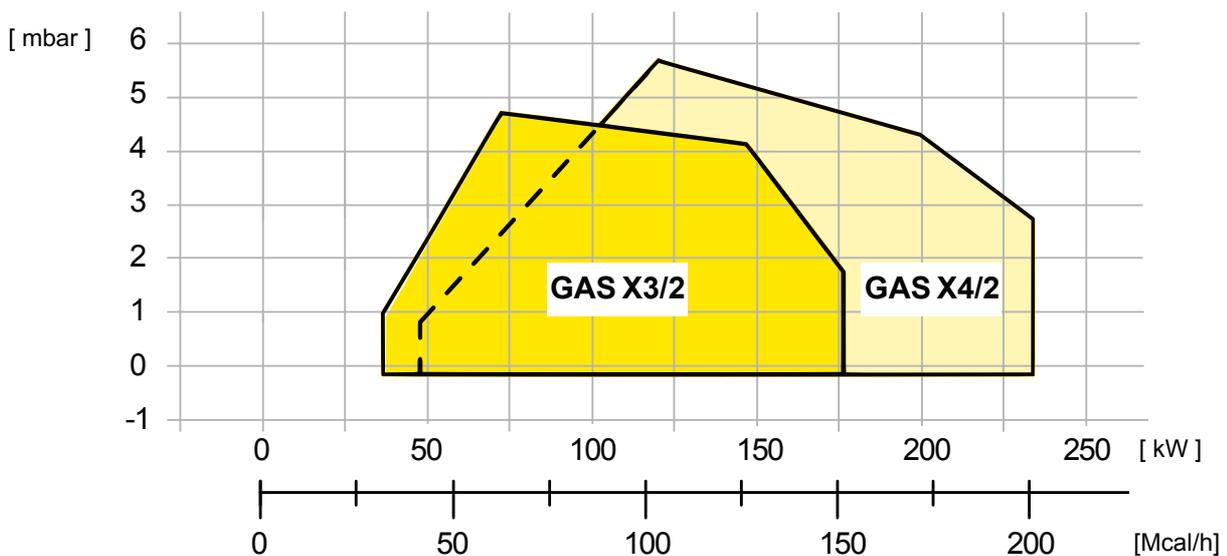


Fig. 3 X = Thermal power Y = Pression in the combustion chamber

The firing rates has been obtained based on test boilers in accordance with EN267 standards and are indicative of matching the burner to the boiler. For the correct operation of the burner, combustion chamber dimensions must be in accordance with current regulation. In case of non-compliance, contact the manufacturer.

TECHNICAL DATA AND OPERATING RANGE DIAGRAM GAS X5/2CE

MODEL	GAS X5/2CE	
Thermal power min. - max. *	[Mcal/h]	70/130-300
Thermal power min. - max. *	[kW]	81.4/151-349
Gas flow G20 (NATURAL GAS) min. - max. *	[Nm <sup>3</sup> /h]	8.2/15.2-35
Gas flow G31 (L.P.G.) min. - max. *	[Nm <sup>3</sup> /h]	3.2/5.8-13.5
Fuel: NATURAL GAS (second family) - L.P.G. (third family)		
Fuel category:	I2R,I2H,I2L,I2E,I2E+,I2Er,I2ELL,I2E(R) / I3B/P,I3+,I3P,I3B,I3R	
Intermittent working operation (min. 1 stop every 24 hours) two stages		
Environmental conditions operation / storage:	-15...+40°C / -20...+70°C, rel. humidity max. 80%	
Max. temperature combustion air	[°C]	60
Min. pressure gas train D1"-S NATURAL GAS/L.P.G. **	[mbar]	27/33
Min. pressure gas train D1"1/4-S NATURAL GAS/L.P.G. **	[mbar]	16/25
Min. pressure gas train D1"1/2-S NATURAL GAS/L.P.G. **	[mbar]	15/12
Max. pressure at the entry of valves (Pe. max)	[mbar]	360
Nominal electric power	[W]	540
Fan motor	[W]	370
Nominal motor current absorption	[A]	2.5
Power supply:	1N~230V - 50Hz	
Electric protection degree:	IP 40	
Noisiness *** min. - max.	[dB(A)]	67-71
Burner weight ****	[kg]	27

\* Reference conditions: Environment temperature 20°C - Barometric pressure 1013 mbars - Altitude 0 metre (sea level).

\*\* Minimal feeding-gas pressure to the gas train to get the maximum power of the burner, considering counter-pressure in combustion chamber of value 0 (zero).

\*\*\* Measured sonorous pressure in the laboratory combustion, with functional burner on beta boiler to 1 metre of distance (UNI EN ISO 3746 law - method of control Class 3 - The tolerance of the measured pressure can be taken equal to ± 1 [dB(A)]).

\*\*\*\* For burner with cover in steel (F) add 5 kg to the weight.



Fig. 4 X = Thermal power Y = Pression in the combustion chamber

The firing rates has been obtained based on test boilers in accordance with EN267 standards and are indicative of matching the burner to the boiler. For the correct operation of the burner, combustion chamber dimensions must be in accordance with current regulation. In case of non-compliance, contact the manufacturer.

DIMENSIONS [MM]

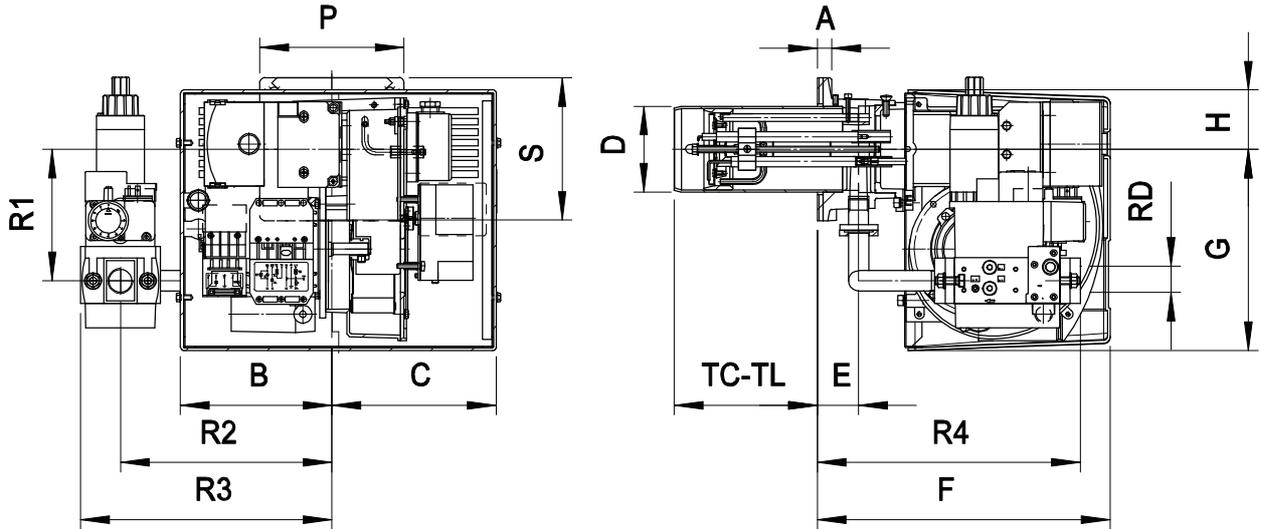


Fig. 5 Dimensions GAS X1/2CE - GAS X2/2CE - GAS X3/2CE - GAS X4/2CE

MODEL	A	B	C	D	E	F	G	H	P	S	R1	R2	R3	R4	RD	Gas train weight
GAS X1/2CE D1/2"-S	15	162	175	90	45	305	210	65	150	150	132	200	275	258	Rp 1/2	2 kg
GAS X2/2CE D3/4"-S	15	162	175	90	45	305	210	65	150	150	138	220	262	275	Rp 3/4	4 kg
GAS X3/2CE D1"-S	16	185	195	108	52	340	248	70	200	162	152	280	337	291	Rp 1	6 kg
GAS X3/2CE D1"1/4-S	16	185	195	108	52	340	248	70	200	160	152	280	337	291	Rp 1"1/4	6 kg
GAS X3/2CE D1"1/2-S	16	185	195	108	52	340	248	70	200	160	152	280	330	439	Rp 1"1/2	9 kg
GAS X4/2CE D1"-S	20	185	195	125	78	368	248	70	200	200	158	280	337	315	Rp 1	6 kg
GAS X4/2CE D1"1/4-S	20	185	195	125	78	368	248	70	200	200	158	280	337	315	Rp 1"1/4	6 kg
GAS X4/2CE D1"1/2-S	20	185	195	125	78	368	248	70	200	200	158	280	330	463	Rp 1"1/2	9 kg

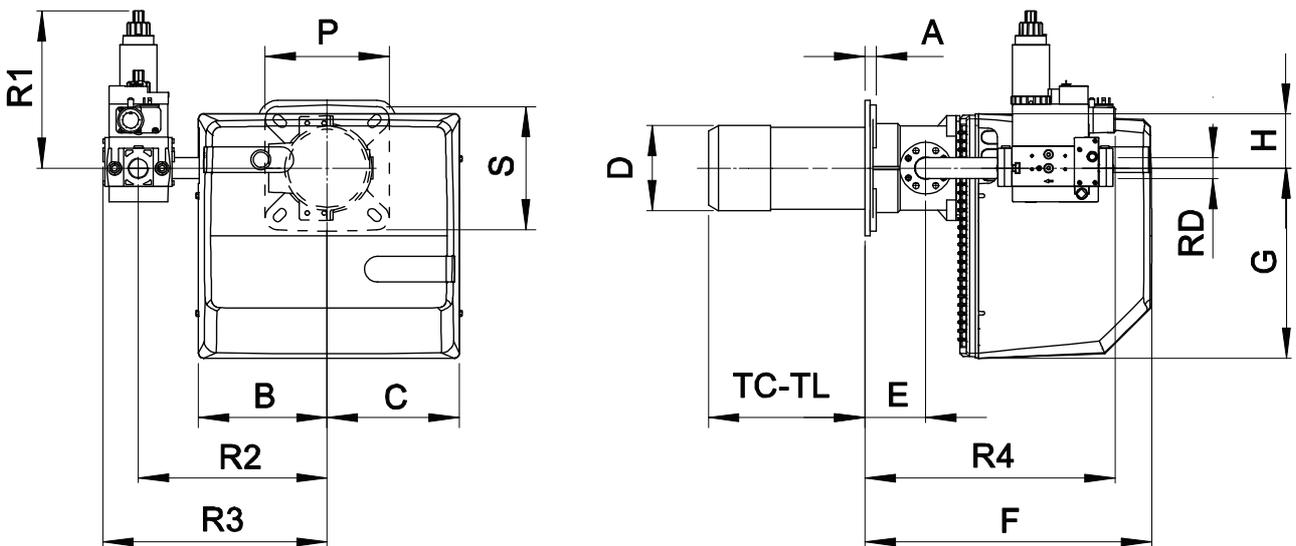
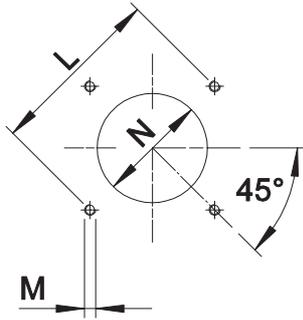


Fig. 6 Dimensions GAS X5/2CE

MODEL	A	B	C	D	E	F	G	H	P	S	R1	R2	R3	R4	RD	Gas train weight
GAS X5/2CE D1"-S	18	207	213	138	98	462	310	90	200	205	255	305	362	363	Rp 1	6 kg
GAS X5/2CE D1"1/4-S	18	207	213	138	98	462	310	90	200	205	255	305	362	363	Rp 1 1/4	6 kg
GAS X5/2CE D1"1/2-S	18	207	213	138	98	462	310	90	200	205	265	305	353	511	Rp 1 1/2	9 kg

TC-TL: see chapter "FLAME TUBE LENGTH"

**BOILER PLATE**



\* Suggested dimension of connection between burner and generator.

**Fig. 7** Boiler plate

MODEL		L min	L *	L max	M	N min	N *	N max
GAS X1/2CE	mm	130	150	170	M8	100	110	130
GAS X2/2CE	mm	130	150	170	M8	100	110	130
GAS X3/2CE	mm	150	170	170	M8	120	130	140
GAS X4/2CE	mm	170	205	226	M10	130	140	160
GAS X5/2CE	mm	205	-	226	M10	150	150	180

**FLAME TUBE LENGTH**

Flame tube length must be selected based on the specifications supplied by boiler manufacturer and, in any case, it must be greater than the thickness of the boiler door included its insulation.

In case of boilers with flame inversion or front flue combustion chambers, it is necessary to insulate the area between the flame tube and front door with refractory material. This protection material must not impede flame tube extraction.

MODEL		TC	TL **
GAS X1/2CE	mm	90	150
GAS X2/2CE	mm	90	150
GAS X3/2CE	mm	130	250
GAS X4/2CE	mm	160	280
GAS X5/2CE	mm	250	335

\*\* For different flame lengths, please contact our Technical-Sales Department.

**PRODUCT SPECIFICATION****SHORT DESCRIPTION**

Gas burners two stages.

**DETAILED SPECIFICATION**

Gas burner two stages composed by:

- Aluminum body;
- Fan at high pressurisation;
- Combustion head with adjustment at high performance and elevated flame stability equipped with inox steel blast tube and steel flame disc;
- Protection cover with noise reduction plate;
- Flange and insulating gasket for fixing at boiler;
- Single-phase power supply;
- Safety air pressure switch to stop the burner in lock-out in case of failed or anomalous fan operation;
- Gas train with: oneblock valve A class (1st stage + 2nd stage slow opening + safety) gas pressure switch - filter stabilizer;
- Optional valve proving system;
- Ionisation probe for flame detection;
- IP 40 electric protection level;
- Servomotor for air shutter and for the consent of the 2nd stage gas valve;
- Moving shutter with total closure when idle in order to reduce at the least energy losses related to boiler cooling down.

**CONFORMING TO:**

- CE rules;
- 2014/30/UE Directive E.M.C.;
- 2014/35/UE Directive L.V.;
- 2006/42/CE - 2006/42/EG - 2006/42/EC Directive M.D.;
- GAS 2016/426/UE Regulation;
- Reference rules: EN676 (gas) – EN 746-2 (industrial thermoprocessing equipment).

**STANDARD EQUIPMENT**

- Isomart gasket;
- Flange with insulating gasket;
- Burner nameplate;
- Warranty;
- Instruction handbook for installation, use and maintenance.

**OPTIONAL**

- Noise protection;
- Antivibration couplings;
- Handle gas taps.